AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Previously Presented) A computer system comprising:

a dedicated special-purpose register file separate from other general register files of the computer system and adapted solely for holding memory address calculation information received from memory, said special-purpose register file having at least one dedicated interface for allowing efficient transfer of memory address calculation information in relation to said special-purpose register file;

wherein said at least one dedicated interface includes a dedicated direct path between said special-purpose register file and memory for loading said special-purpose access register file from memory; and

means for determining a memory address in response to memory address calculation information received from said special-purpose register file, thus enabling a corresponding memory access.

2. (Original) The computer system according to claim 1, further comprising means for effectuating a memory access based on the determined memory address.

3. (Canceled)

4. (Original) The computer system according to claim 1, wherein said at least one dedicated interface comprises a dedicated interface between said special-purpose register file and said means for determining a memory address.

5. (Original) The computer system according to claim 1, wherein said at least one dedicated interface includes a dedicated data path adapted in width to said memory address calculation information.

6. (Original) The computer system according to claim 1, wherein said memory comprises a dedicated cache adapted for said memory address calculation information.

7. (Original) The computer system according to claim 1, wherein said means for determining a memory address comprises at least one functional processor unit.

8. (Original) The computer system according to claim 7, wherein a forwarding data path is arranged from an output bus associated with said at least one functional processor unit to an input bus associated with said at least one functional processor unit.

9. (Original) The computer system according to claim 1, wherein said means for determining a memory address is operable for executing special-purpose instructions in order to determine said memory address.

10. (Original) The computer system according to claim 1, further comprising means for executing special-purpose load instructions in order to load said memory address calculation information from said memory to said special-purpose register file.

11. (Original) The computer system according to claim 10, wherein said means for executing special-purpose load instructions comprises at least one functional processor unit.

12. (Original) The computer system according to claim 11, wherein a forwarding data path is arranged from said memory to an input wherein said memory address calculation information is in the form of implicit memory access information.

13. (Canceled)

14. (Previously Presented) The computer system according to claim 23, wherein said implicit memory access information includes memory address translation information.

15. (Previously Presented) A computer system comprising:

a dedicated cache adapted for holding memory access information;

a dedicated special-purpose register file separate from other general register files of the computer system and adapted solely for holding memory access information received from said dedicated cache over a first dedicated interface;

wherein said first dedicated interface includes a dedicated direct path between said special-purpose register file and the dedicated cache for loading said special-purpose access register file from the dedicated cache;

means for determining a memory address in response to memory access information received from said special-purpose register file over a second dedicated interface; and

means for effectuating a corresponding memory access based on the determined memory address.

16. (Original) The computer system according to claim 15, wherein said first and second dedicated interfaces are adapted in width to said memory address calculation information.

17. (Previously Presented) A method of handling memory address calculation information, said method comprising the steps of:

holding memory address calculation information received from memory, in a dedicated special purpose register file, the special-purpose register file being separate from other general register files and adapted solely for holding memory address calculation information;

transferring memory address calculation information in relation to said special-purpose register file via at least one dedicated interface associated with said special purpose register file, wherein said at least one dedicated interface includes a dedicated direct path between said special-purpose register file and memory for loading said special-purpose access register file from memory; and

determining a memory address in response to memory address calculation information received from said special-purpose register file, thus enabling a corresponding memory access.

18. (Previously Presented) The method according to claim 17, further comprising the step of effectuating a memory access based on the determined memory address.

19. (Canceled)

20. (Previously Presented) The method according to claim 17, wherein said at least one dedicated interface comprises a dedicated interface between said special-purpose register file and a means for determining a memory address.

21. (Previously Presented) The method according to claim 17, further comprising the step of adapting a dedicated data path in width to said memory address calculation information.

22. (Previously Presented) The method according to claim 17, further comprising the step of utilizing a dedicated cache adapted for said memory address calculation information.

23. (Previously Presented) The computer system according to claim 1, wherein said memory address calculation information is in the form of implicit memory access information.